

## REGISTRATION OF 'SANTA RITA' FOURWING SALT BUSH

'Santa Rita' fourwing saltbush, Atriplex canescens, (Pursh.) Nutt. was developed by the USDA Soil Conservation Service, Tucson, Arizona. It is a deep-rooted, drought-tolerant, evergreen, dioecious shrub ranging from 1.5 to 2.0 meters tall. It has excellent salt tolerance and grows on a wide range of soil textures ranging from sands to clay loam.

### Use

The collection that led to the release of 'Santa Rita' fourwing saltbush was from a native stand on the Santa Rita Experimental Range, Pima County, Arizona in 1962. Since 1962, this collection has been evaluated in numerous plantings for mine land reclamation, range improvement, critical area stabilization, highway beautification and for controlling wind erosion on abandoned cropland in the lower Sonoran desert. Field identification numbers used during field tests were P-15644, T-3553, A-16805, and BN-15412-63, and the permanent number--9003553--was assigned by the National Plant Materials Center. It was cooperatively released by the Arizona Agricultural Experiment Station, USDA Agricultural Research Service and Soil Conservation Service in 1987.

### Adaptation

'Santa Rita' fourwing saltbush is adapted for use in the Sonoran, Mohave and Chihuahuan deserts of west Texas and southern portions of New Mexico, Arizona and California from 200 to 4,000 feet (61-1220 m) elevation and rainfall from 8 to 16 inches (20-41 cm). 'Santa Rita' was selected for use in critical area stabilization, shelterbelts, range improvement and improvement of the vegetative components of wildlife habitat.

### Development

'Santa Rita' fourwing saltbush was comparatively evaluated with 8 accessions of fourwing saltbush in the 1966 Shrub IEP and 35 accessions of fourwing saltbush in the 1969 Shrub IEP at the Tucson Plant Materials Center. It was also field tested at 25 sites in southern Arizona, California, New Mexico and Texas. 'Santa Rita' has shown superior seedling vigor, plant productivity and seed production over all accessions of fourwing saltbush, including the standards of comparison 'Marana', 'Rincon' and 'Wytana'.

### Establishment

'Santa Rita' fourwing saltbush is easily established from seed or rooted cuttings. Optimum planting dates for planting seed or transplanting rooted

cuttings in the lower desert areas are November 1 to December 1 to take advantage of winter moisture. There are 108,000 de-winged seed per pound. A seeding rate of one PLS pound per acre will provide 2.5 live seeds per square foot.

#### Seed Production

Best seed yields have been obtained from spaced plantings using rooted cuttings. A ratio of one (1) male to five (5) female plants--space planted with 5 feet within the row and 15 feet between rows--have averaged 350 pounds per acre (393 kg/ha) of de-winged seed.

Breeders and foundation seed will be maintained by the SCS Plant Materials Center, Tucson, Arizona. Foundation seed will be available to growers through the Arizona Crop Improvement Association and/or Arizona Natural Resource Conservation Districts.